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CENTRAL INTELLIGENCE AGENCY PHOTOGRAPHIC INTELLIGENCE REPORT		
SOVIET-TYPE SAM INSTALLATIONS. WACS 235, 236, 238, 239, 244, 245, 246, AND 248 THROUGH 252		
		
		
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CENTRAL INTELLIGENCE AGENCY
PHOTOGRAPHIC INTELLIGENCE REPORT

SOVIET-TYPE SAM INSTALLATIONS,
WACS 235, 236, 238, 239, 244, 245, 246,
AND 248 THROUGH 252

CIA/PIR-15/64
June 1964

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PREFACE

This is the seventh in a series of reports, prepared in response to CIA requirement G-RR3-80733, presenting locational and other pertinent information on all Soviet-type surface-to-air missile (SAM) installations. 1-6/ Installations included are SAM launch sites (SA-1, SA-2, SA-3, and SA-4), antiaircraft-missile activities, SAM support facilities, SAM R & D and training facilities, and

unidentified installations, possibly SAM-related. The information will be presented by World Aeronautical Chart (WAC), and within each WAC by SAM defense area, as determined from photography and collateral sources. When the defense function of an installation has not been determined, this will be so indicated. Where no installations have been identified in a WAC area, that WAC will be omitted.

INTRODUCTION

This report presents information on all Soviet-type SAM installations located in the areas covered by WACs 235, 236, 238, 239, 244, 245, 246, 248, 249, 250, 251, and 252 and identified on photography. The cutoff date for this information is 15 May 1964. Figure 1 shows all the WAC areas, except Cuba, which will be covered in this series; those in red are covered in this report. WACs covered in the previous reports are outlined in red, and the report numbers are indicated on the graphic. Diagrams of the configurations of the common types of SAM installations are presented in Figure 2. Information for each WAC is shown in a table (Tables 1-12), which gives detailed data, and a map (Figures 3-14), which indicates the location and type of each SAM installation. Due to the volume of data for WAC 250, Figure 12 has been repeated for easier reference.

Explanations of the columnar headings used in the tables are as follows:

Item--Given in numerical sequence for each WAC, with numbers assigned to installations arbitrarily, and keyed to the accompanying WAC.

Name, Site Designator, BI Number--In accordance with the TDI. Absence of any of this information indicates that it was not available at the time of publication.

Coordinates--Given in degrees, minutes, and seconds, and plotted from series 200 US Air Target Charts unless otherwise indicated in next column.

Country & Map Reference--BI: country codes used. Map reference is to the Air Target Chart sheet number (scale 1:200,000) unless otherwise indicated.

Type & Configuration--Indicates the type of SAM installation and its configuration as illustrated in Figure 2.

Mission & Date First Appears--Gives the number and date of the mission on which the installation was first sighted.

Mission & Date Installation Negated--Refers to the latest KEYHOLE photography on which it has been established that construction of the installation had not been started. Absence of any notation indicates that this information could not be determined.

Remarks--Covers items of special or unusual interest.

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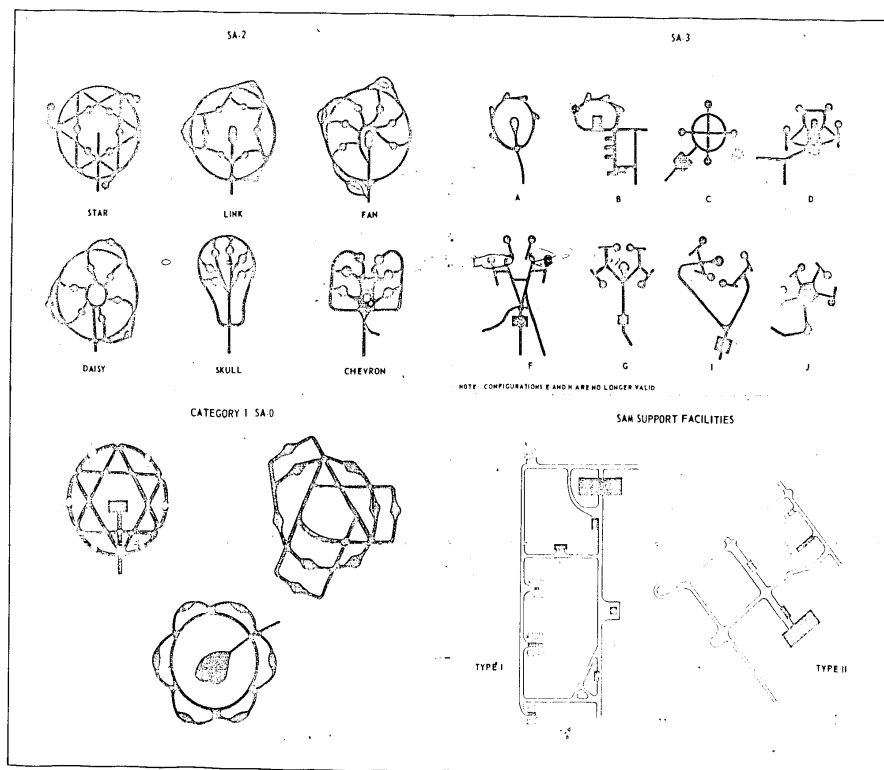


FIGURE 2. SAM INSTALLATION CONFIGURATIONS (NOT DRAWN TO COMBAT SCALE)

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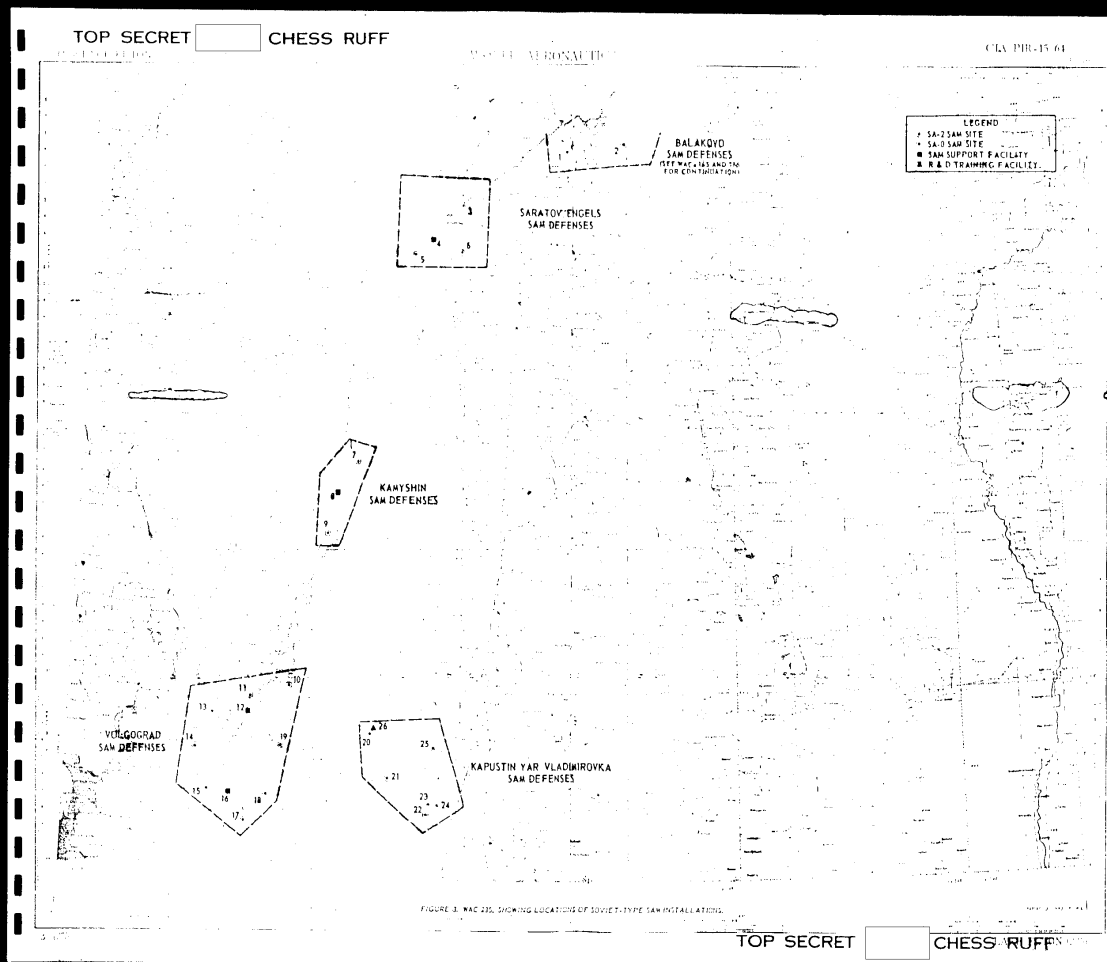
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Table 1. SAM Installations in RDP 255

Item	Name, Site Designation, & RE No.	Coordinates	Country & Map Ref.	Type & Configuration	Mission & Date Installation Required	Remarks
A. Bulskov SAM Defense (probably in defense of Yod-K Central Chemical Processing Ground, Sakhasy)						
1	Vol 4 SAMs to 117	51-54-30N 47-56-30E	FR 0235-3	SA-2, category 1		
2	Bulskov SAM site	51-56-10N 47-58-30E	FR 0235-3	SA-2, category 1		
B. Saratov-Papilo SAM Defense (in defense of Saratov Long Range Air Base in Engels; POL refining and storage facilities, power plants, railroad locomotive repair, railroad car servicing, and structural facilities; production facilities for electrical equipment, aircraft parts, guns, chemicals, munitions, metal products, and short-range missiles and SAMs)						
3	Saratov SAM Site B15-2	51-36-30N 46-28-15E	FR 0235-2	SA-2, star		
4	Saratov SAM Support Facility	51-34-40N 46-10-00E	FR 0235-2	Type I (rectangular)		
5	Saratov SAM Site B15-2	51-29-00N 46-01-15E	FR 0235-2	SA-2, star		
6	Saratov SAM Site C13-2	51-23-45N 46-28-30E	FR 0235-2	SA-2, link		
C. Kamyshin SAM Defense (in defense of Kamyshin; railroad facilities, POL storage, and light industry)						
7	Kamyshin SAM Site A01-2	50-13-50N 45-55-20E	FR 0235-12	SA-2, star		
8	Kamyshin SAM Support Facility	50-03-00N 45-21-30E	FR 0235-12	Type II (square)		
9	Kamyshin SAM Site B21-2	49-50-45N 45-15-30E	FR 0235-12	SA-2, star		
D. Volgograd SAM Defense (in defense of Volgograd; major supplier of military equipment—tanks, guns, explosives, ammunition, small arms, and IR, CW agents; transportation facilities, POL, refining and storage facilities, and power plants; and production of chemicals, steel, aluminum, tractors, and oil-rigging equipment)						
10	Volgograd SAM Site C05-2	49-01-00N 44-59-00E	FR 0235-17	SA-2, daisy		
11	Volgograd SAM Site B03-2	48-57-50N 44-39-30E	FR 0235-16	SA-2, daisy		
12	Volgograd SAM Support Facility	48-52-30N 44-38-25E	FR 0235-16	Type I (rectangular)		
13	Volgograd SAM Site B15-2	48-51-45N 44-19-00E	FR 0235-16	SA-2, daisy		
14	Volgograd SAM Site B27-2	48-40-15N 44-10-00E	FR 0235-21	SA-2, daisy		
15	Volgograd SAM Site B25-2	48-27-00N 44-18-45E	FR 0235-21	SA-2, fan		
16	Volgograd SAM Support Facility	48-26-00N 44-00-00E	FR 0235-21	Type I (rectangular)		
17	Volgograd SAM Site C17-2	48-12-00N 44-08-00E	FR 0235-21	SA-2, daisy		
18	Volgograd SAM Site B15-2	48-26-50N 44-10-20E	FR 0235-22	SA-2, link		
19	Volgograd SAM Site B09-2	48-42-20N 44-55-10E	FR 0235-22	SA-2, link		
E. Kapustin Yar-Vladimirovka SAM Defense (in defense of Kapustin Yar-Vladimirovka Missile Test Center-KY-Vlad MFC and Vladimirovka Advanced Weapons and Research Complex-AVARC; R & D facilities for SAM, MBM, IRBM, ASM, and cruise missile systems)						
20	KY-Vlad MFC SAM Site B09-2	48-42-00N 45-41-00E	FR 0235-22	SA-2, star		
21	KY-Vlad MFC SAM Site B15-2	48-31-00N 45-53-20E	FR 0235-22	SA-2, star		
22	Vladimirovka SAM Site A01-2	48-21-55N 46-11-00E	FR 0235-22	SA-2, star		
23	Vladimirovka SAM Site A01-2	48-24-00N 46-15-00E	FR 0235-22	SA-2, probable star		
24	Vladimirovka SAM Site A01-2	48-24-00N 46-15-25E	FR 0235-22	SA-2, configuration		
25	KY-Vlad MFC SAM Site B09-2	48-12-00N 46-36-00E	FR 0235-22	SA-2, star		
26	KY-Vlad MFC SAM Launch Complex	48-16-00N 45-45-00E	FR 0235-22	SA-2, star and training center		

This unvetted site is adjacent to SAM Site A01-2. It was formerly named as a Category 2 SAM SAM site.

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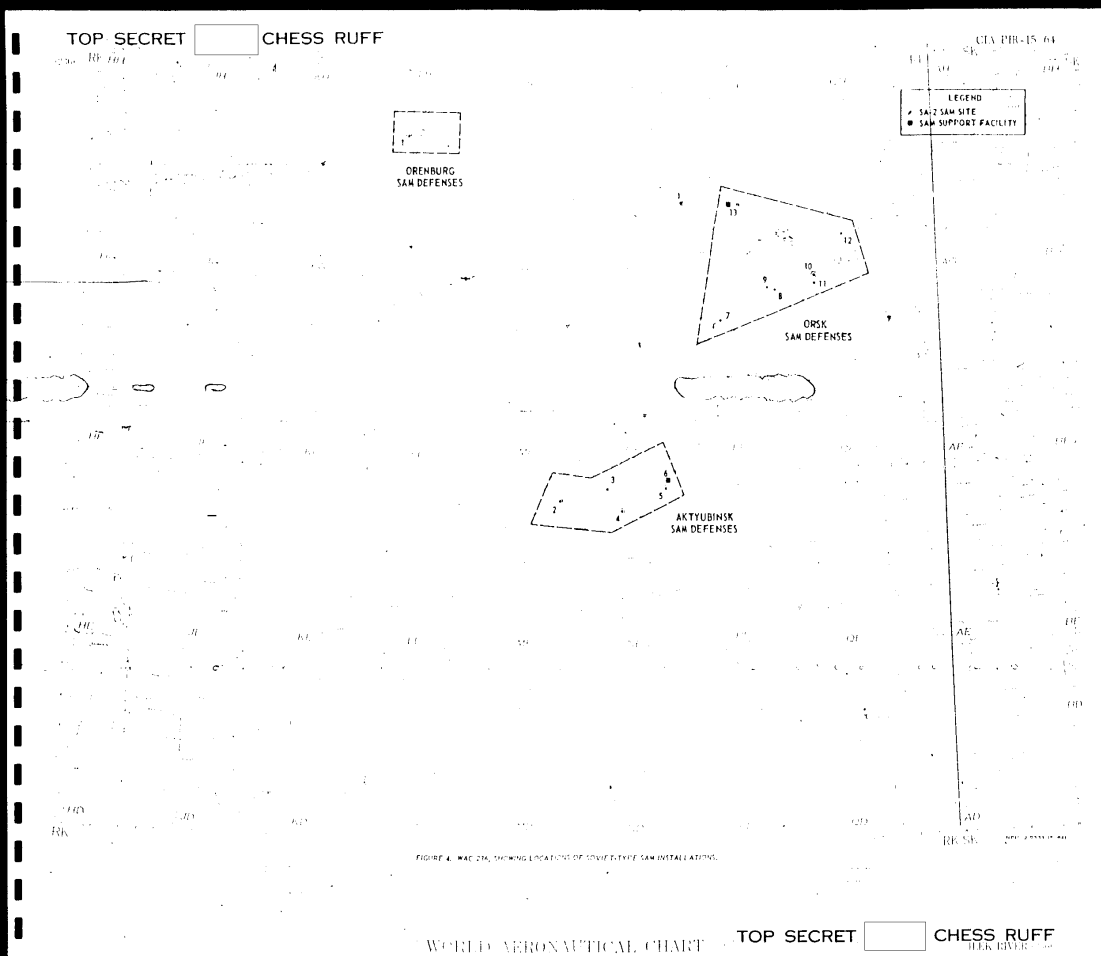


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Table 2. SAM Installations in R-10-250

Item	Name, Site Designator, & BE No.	Coordinates	Country & Map Ref.	Type & Configuration	Mission & Date First Appeared	Mission & Date Installation Acquired	Remarks
A. Dushenburg SAM Defense (in defense of major transportation, industrial, and military complex in southern Ukraine region; in contrast, vehicle, and tractor parts, ammunition, food, machinery, and surfaces)							
1	Dushenburg SAM Site A7002 	51-41-00N 24-56-25E	FR 02/36-2	SA-2, configuration undetermined			Although the Dushenburg area appears to have strategic significance, this is the only SAM site identified thus far in the area, and it appears to be a training site.
B. Kryukov & IRBM Complex SAM Defense (in defense of Kryukovsk IRBM Complex)							
2	Kryukov & SAM Site 	49-48-50N 26-26-30E	FR 02/36-13	SA-2, configuration undetermined			The launch positions at this site are revealed, but no service road configuration is visible. There are no site support buildings.
3	Kryukov & SAM Site C21-2 	49-52-34N 26-52-30E	FR 02/36-13	SA-2, configuration undetermined			
4	Kryukov & SAM Site B20-2 	49-41-00N 24-00-00E	FR 02/36-13	SA-2, configuration undetermined			
5	Kryukov & SAM Site C17-2 	49-51-25N 27-24-30E	FR 02/36-13	SA-2, star			
6	Alpa SAM Support Facility 	49-51-00N 27-25-00E	FR 02/36-14	Type II (square)			
C. Dn-4 SAM Defenses (in defense of Dn-4 nickel combine, POL refining and storage facilities, heavy machinery plant, and metallurgical combine at Novotroitsk)							
7	Dn-4 SAM Site C21-2 	50-46-30N 25-52-40E	FR 02/36-9	SA-2, probable star			This site is unvetted.
8	Dn-4 SAM Site B20-2 	50-57-30N 28-25-00E	FR 02/36-9	SA-2, star			
9	Dn-4 SAM Site B30-2 	50-57-30N 28-25-00E	FR 02/36-9	SA-2, configuration undetermined			
10	Dn-4 SAM Site B15-2 	51-00-10N 28-50-32E	FR 02/36-9	SA-2, probable star			
11	Dn-4 SAM Site B15-2 	51-00-10N 28-50-32E	FR 02/36-9	SA-2, configuration undetermined			This site is unvetted.
12	Dn-4 SAM Site C10-2 	51-11-30N 29-06-42E	FR 02/36-4	SA-2, probable star			
13	Khalilov SAM Support Facility 	51-21-00N 28-02-30E	FR 02/36-4	Type II (square)			



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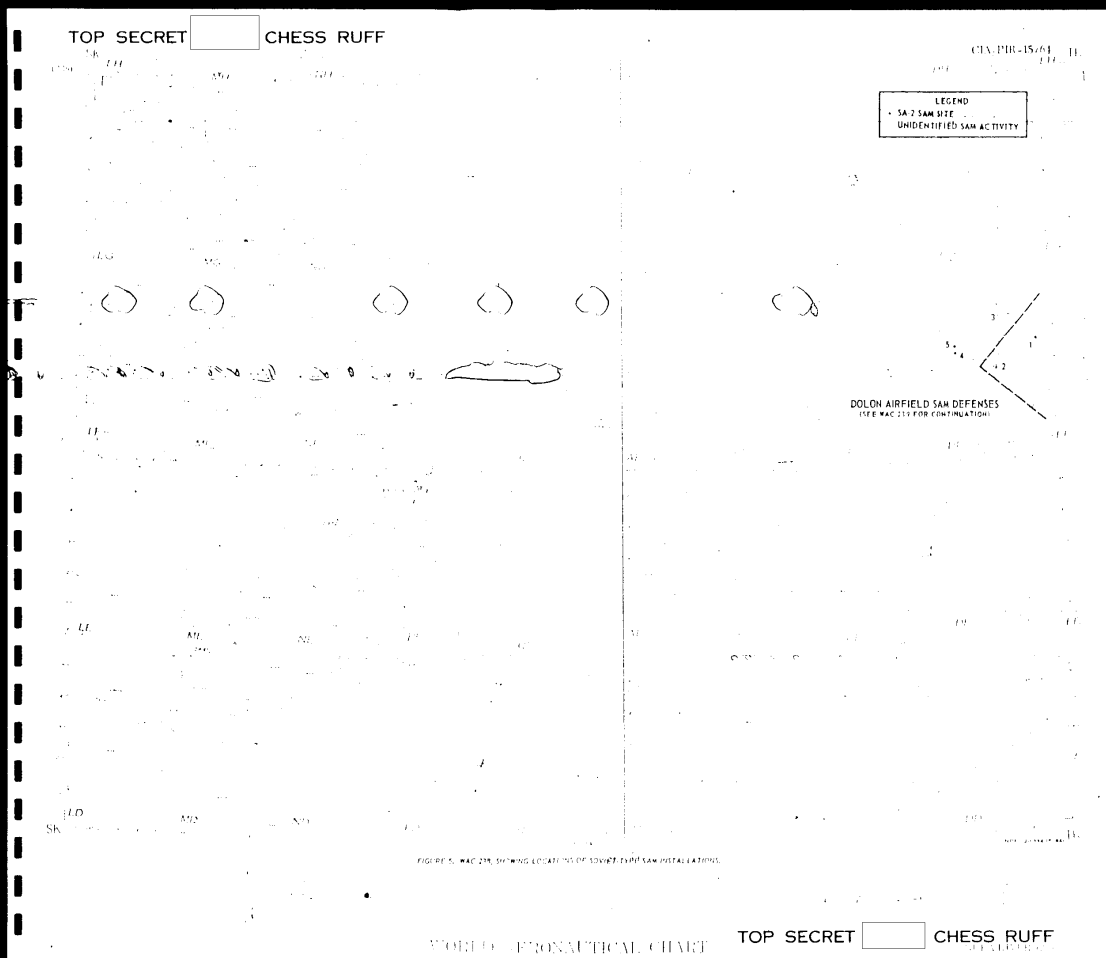
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TABLE 1. SAM Facilities on RDP-78

Item	Name, Site Designator, & Ref. No.	Coordinates	Country & Map Ref.	Type & Configuration	Mission & Date For Appearance	Remarks & Date In Addition Reported	Remarks
A. Defense Airfield SAM Defense (in defense of Santa Long Range Air Base and nuclear weapons storage sites)							
1.	Defense SAM Site BSA-1	20-26-50N 108-32-10E	TR 0238-10	SA-2, link			
2.	Defense SAM Site BSA-2	20-27-00N 108-31-00E	TR 0238-10	SA-2, link			
B. Surveillance & Nuclear Response Training Ground Unidentified Activity							
3.	Surveillance & Unidentified Activity	20-42-45N 108-32-30E	TR 0238-10	Configuration undetermined, probable sites			This activity consists of two sites, which formerly were called possible ABM launch sites because they bore some resemblance to sites 2 and 4 at Launch Complex 9, SCATC. When they were observed in the summer of 1967, the similarity was not so great as it had been formerly.
C. Defense Airfield Unidentified							
4.	Defense SAM Site DSA-1	20-34-45N 108-11-40E	TR 0238-10	SA-2, configuration undetermined			This site is uncorrected.
5.	Defense SAM Site DSA-2	20-31-45N 108-11-40E	TR 0238-10	SA-2, probable link			

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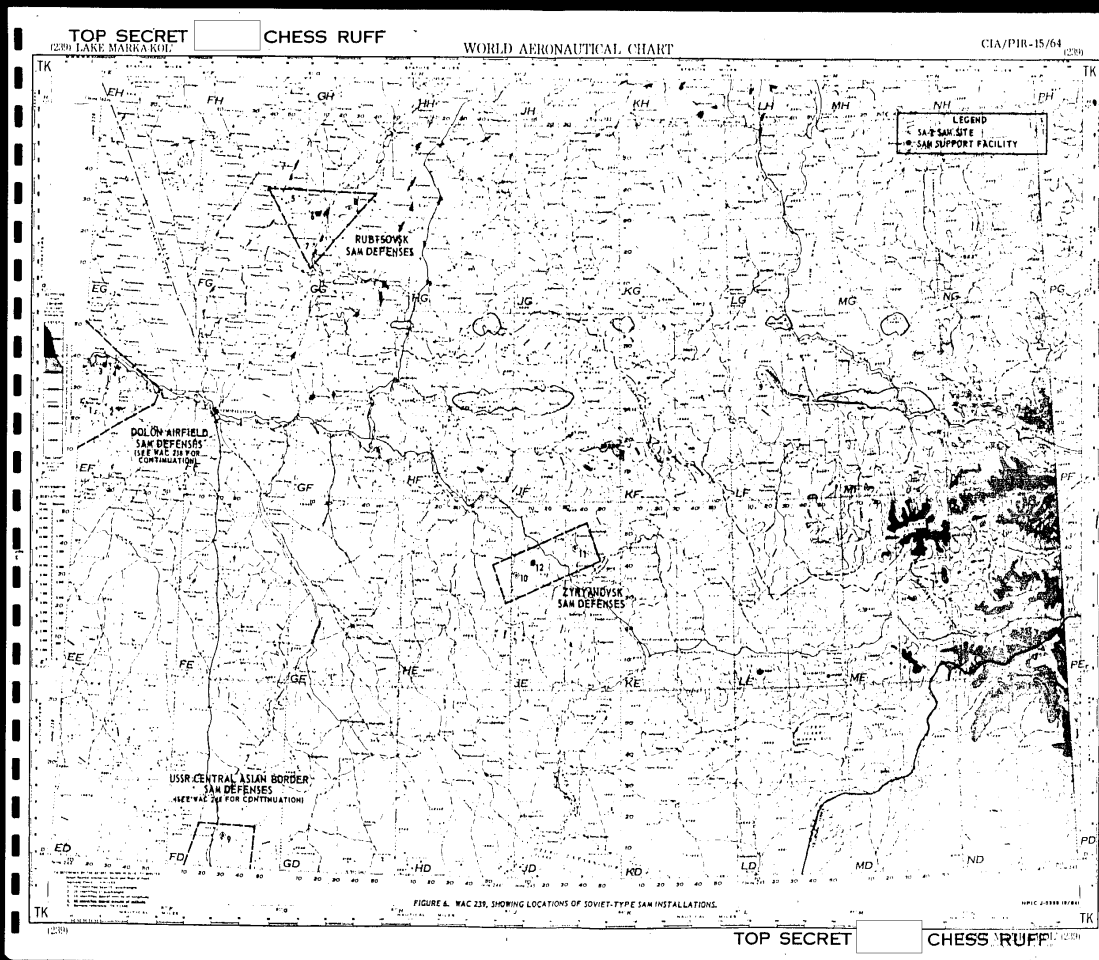
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Table 4. SAM Installations on RUC 223

Item	Name, Site Designator, & BE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Appears	Mission & Date Installation Negated	Remarks
A. Doton Airfield SAM Defenses (in defense of Soviet Long Range Air Arm Base and nuclear weapons storage site)							
1	Doton SAM Site B25-2	50-23-50N 70-02-10E	UR 0239-11	SA-2, link			
2	Doton SAM Site A15-2	50-23-10N 70-21-30E	UR 0239-11	SA-2, link			
3	Doton SAM Support Facility	50-37-10N 70-13-50E	UR 0239-6	Type I (rectangular)			
4	Doton SAM Site A04-2	50-37-30N 70-10-40E	UR 0239-6	SA-2, probable link			
B. Rubtsovsk Area SAM Defenses (probably in defense of Central Asian border of USSR and Rubtsovsk tractor plant and power plant)							
5	Rubtsovsk SAM Site B30-2	51-33-10N 80-49-00E	UR 0239-2	SA-2, link			
6	Rubtsovsk SAM Support Facility	51-29-00N 81-08-20E	UR 0239-2	Type II (square)			
7	Rubtsovsk SAM Site B20-2	51-20-15N 81-06-00E	UR 0239-2	SA-2, link			
8	Rubtsovsk SAM Site A00-2	51-31-30N 81-06-40E	UR 0239-2	SA-2, configuration undetermined			
C. USSR Central Asian Border Defenses (in defense of the Central Asian border of the USSR)							
9	Ayaguz SAM Site B03-2	48-10-00N 80-30-00E	UR AMS Series 1301 Sheet NM-44, 2d ed, Mar 56	SA-2, link			
D. Zyrtyanovsk SAM Defenses (defense role undetermined)							
10	Ust-Kamenogorsk SAM Site C15-2	49-36-05N 83-03-25E	UR 0239-13	SA-2, configuration undetermined			
11	Zyrtyanovsk SAM Site C26-2	49-44-05N 83-36-15E	UR 0239-13	SA-2, link			
12	Serdobayevsk SAM Support Facility	49-10-40N 83-12-50E	UR 0239-13	Type II (square)			

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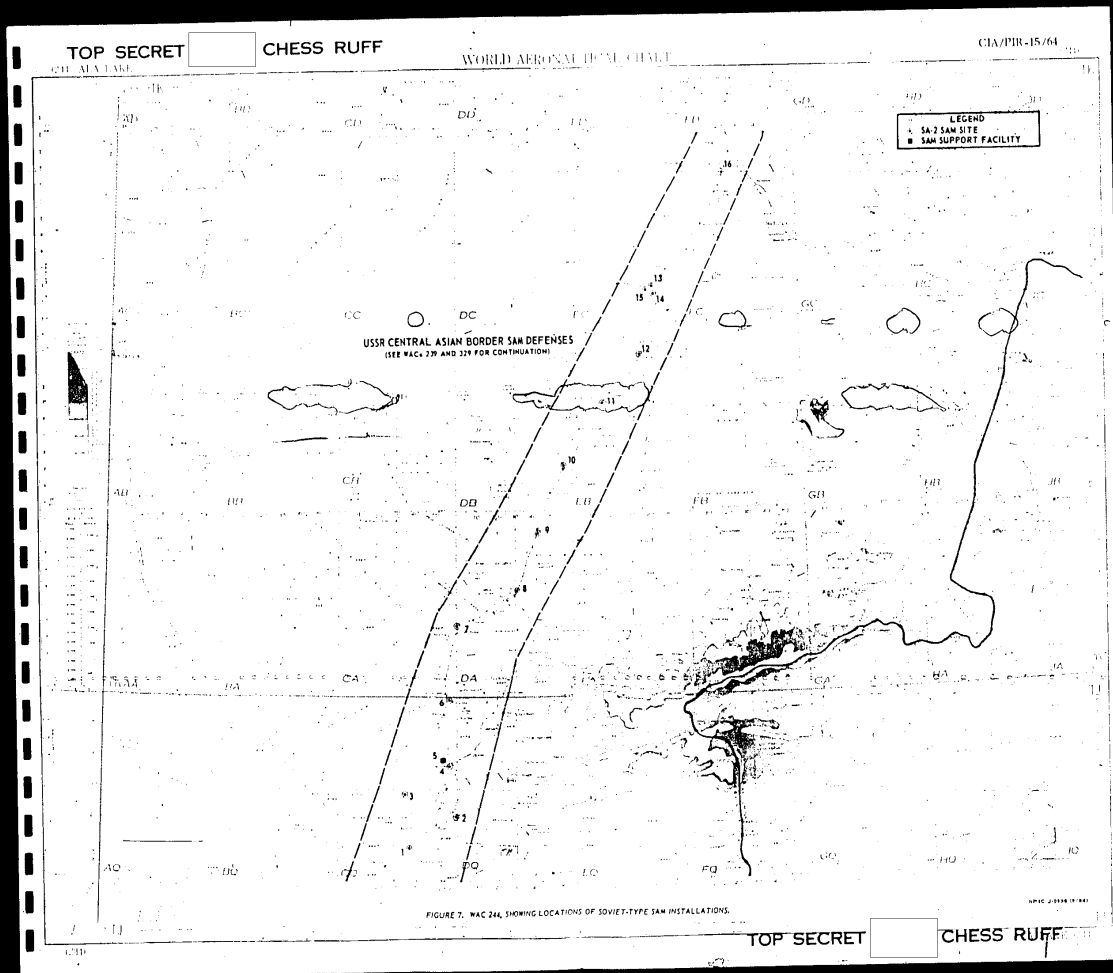


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Table 5. SAM Installations on 4/4/64

Item	Name, Site Designator, & BE No	Coordinates	Country & Map Ref	Type & Configuration	Remarks
A. USSR Central Asian Border SAM Defenses (in defense of the central Asian border of the USSR)					
1	Sary Ozek SAM Site B10-2	44-11-15N 77-57-10E	UR 0244-22	SA-2, link	Also defends Sary Ozek IRBM Complex. Also defends Sary Ozek IRBM Complex. Also defends Sary Ozek IRBM Complex. Also defends Sary Ozek IRBM Complex. Also defends Sary Ozek IRBM Complex. A secured vehicle rack is one km east. In April 1964 it contained 20 missile transporters, 13 transporter-trailers, 6 prime movers, 2 loaded missile transporters, and numerous canisters. The installation is similar to several SAM assembly areas seen in Cuba.
2	Sary Ozek SAM Site A15-2	44-21-00N 78-00-00E	UR 0244-22	SA-2, link	
3	Sary Ozek SAM Site B20-2	44-28-05N 77-51-25E	UR 0244-22	SA-2, probable link	
4	Sary Ozek SAM Site B30-2	44-37-00N 77-57-50E	UR 0244-22	SA-2, link	
5	Sary Ozek SAM Support Facility	44-57-30N 77-57-30E	UR 0244-22	Type II (square)	
6	Ush-Tobe SAM Site B10-2	44-50-05N 77-50-10E	UR 0244-17	SA-2, link	This unsecured site is collocated with Atkogy SAM Site B02-2. It was previously carried as a Category 2 SA-2 SAM Site.
7	Ush-Tobe SAM Site A05-2	45-25-00N 78-01-43E	UR 0244-17	SA-2, link	
8	Ush-Tobe SAM Site D00-2	45-04-00N 78-52-00E	UR 0244-18	SA-2, link	
9	Lopsy SAM Site (21-2)	45-52-40N 78-43-15E	UR 0244-18	SA-2, link	
10	Lopsy SAM Site A05-2	46-14-25N 78-57-10E	UR 0244-13	SA-2, link	
11	Atkogy SAM Site A10-2	46-34-45N 79-10-00E	UR 0244-8	SA-2, link	
12	Atkogy SAM Site A10-2	46-40-05N 79-06-50E	UR 0244-8	SA-2, configuration undetermined	
13	Atkogy SAM Site B02-2	47-09-15N 79-43-05E	UR 0244-8	SA-2, link	
14	Atkogy SAM Site	47-09-40N 79-42-30E	UR 0244-8	SA-2, configuration undetermined	
15	Atkogy SAM Site B02-2	47-10-55N 79-42-55E	UR 0244-8	SA-2, link	
16	Aynguz SAM Site A10-2	47-47-00N 80-22-30E	UR 0244-4	SA-2, link	



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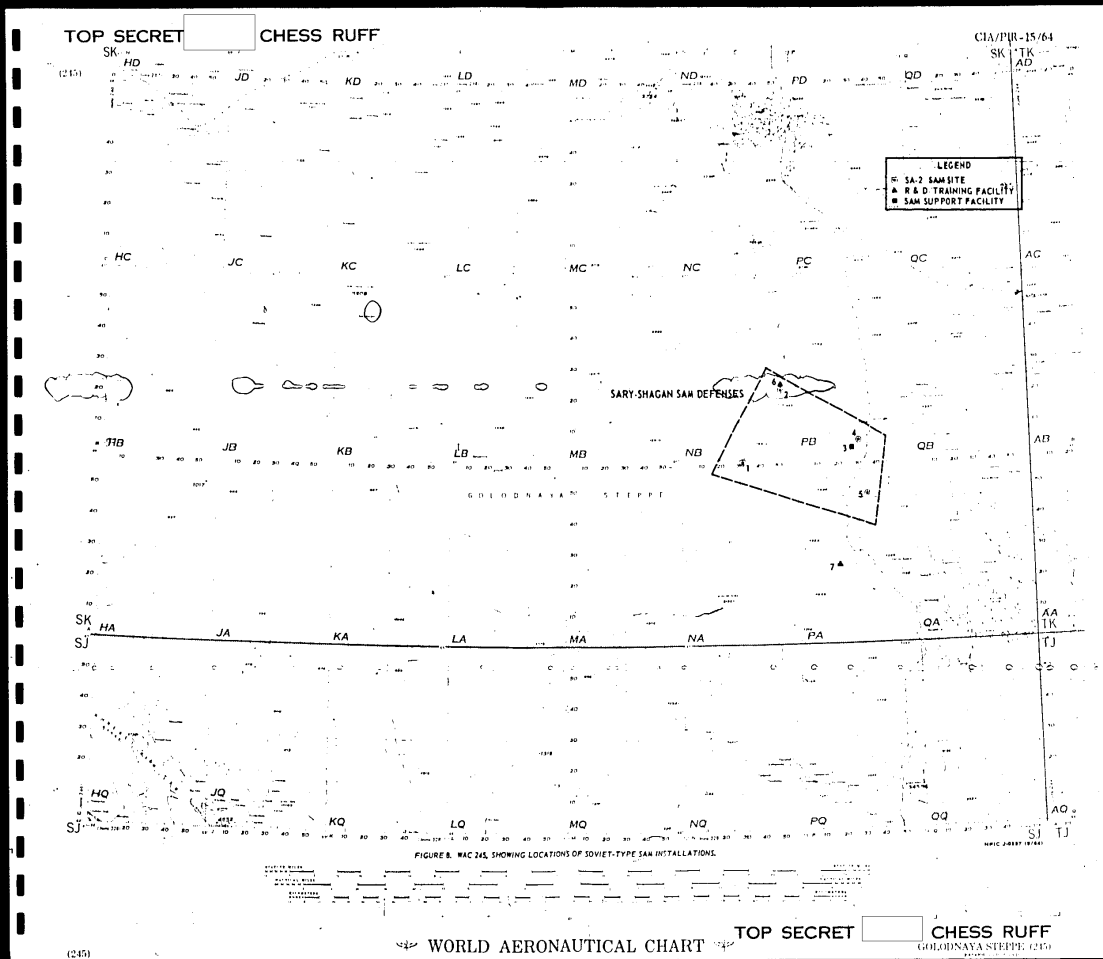
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Table 6. SAM Installations on WJOT 215

Item	Name, Site Designator, & BE No.	Coordinates	Country & Map Ref.	Type & Configuration	Mission & Date First Appears	Mission & Date Installation Negotiated	Remarks
A. Sary-Shagan SAM Defenses (in defense of Sary-Shagan Antimissile Test Center-SSATC. Rather than forming an actual defense complex, these sites consist of a group of point defenses required by the extensive area covered by the Sary-Shagan facilities)							
1	SSATC SAM Site B2T-2	45-50-30N 72-51-40E	UR 0245-14	SA-2, star			This site is located at Launch Complex B, Sary-Shagan.
2	SSATC SAM Site C35-2	46-22-10N 72-51-30E	UR 0245-14	SA-2, star			This site is located at Launch Complex A, Sary-Shagan.
3	SSATC SAM Support Facility	46-03-10N 72-26-00E	UR 0245-15	Type II (square)			This facility is located at the Support Base, Sary-Shagan.
4	SSATC SAM Site A35-2	46-05-15N 72-51-10E	UR 0245-15	SA-2, star			This site is located at the Support Base, Sary-Shagan.
5	SSATC SAM Site B10-2	45-48-00N 72-55-45E	UR 0245-15	SA-2, star			This site is located near Instrumentation Site 1 and the Film Flam station, Sary-Shagan.
6	SSATC, Launch Complex A	46-23-00N 72-52-00E	UR 0245-14	See remarks			The entire test center is apparently engaged in AMM-related activity, but Launch Complex A is the most likely AMM launch area.
B. Operational Role Undetermined							
7	SSATC SAM Training Center	45-25-00N 78-20-00E	UR 0245-10	SAM training center			This training center has at least three, and probably five, launch sites. The associated facilities do not appear adequate to support a large, sustained effort.

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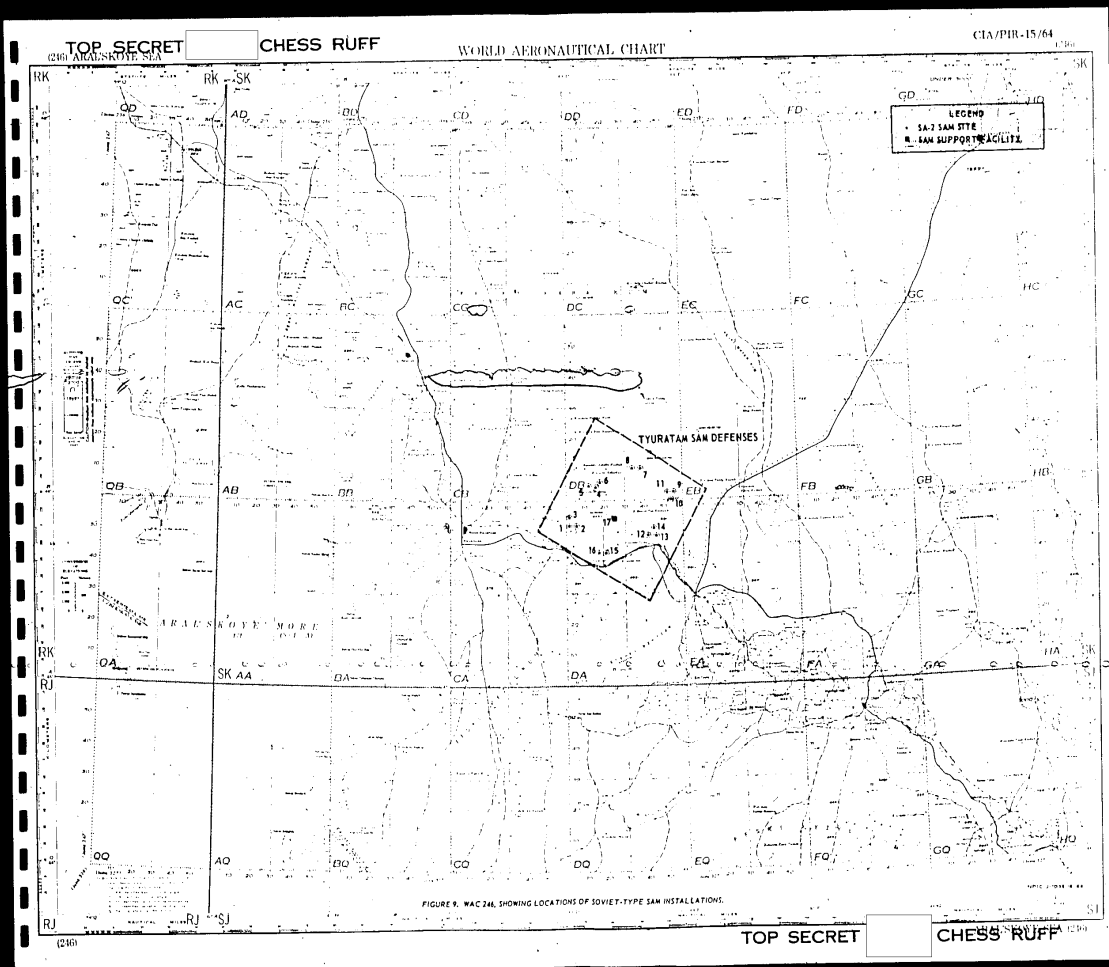
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Table 7. SAM Installations on R 36 226

Item	Name, Site Designator, & BE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Appeared	Mission & Date Installation Suggested	Remarks
A. Tyuratam SAM Defenses (in defense of Tyuratam Missile Test Center--TTMTC: Soviet R&D and space research and development center)							
1	TTMTC SAM Site B26-2, ☐	45-51-45N 63-02-20E	UR 0216-13	SA-2, configuration undetermined			
2	TTMTC SAM Site B26A-2, ☐	45-51-40N 63-05-20E	UR 0216-13	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
3	TTMTC SAM Site B26B-2, ☐	45-51-35N 63-02-50E	UR 0216-13	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
4	TTMTC SAM Site B27-2, ☐	46-01-10N 63-14-30E	UR 0216-13	SA-2, configuration undetermined			
5	TTMTC SAM Site B22A-2, ☐	46-03-35N 63-14-10E	UR 0216-13	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
6	TTMTC SAM Site B22B-2, ☐	46-04-00N 63-15-00E	UR 0216-13	SA-2, configuration undetermined			This site is unretired.
7	TTMTC SAM Site B03-2, ☐	46-09-40N 63-36-30E	UR 0216-13	SA-2, configuration undetermined			
8	TTMTC SAM Site B03A-2, ☐	46-09-30N 63-36-50E	UR 0216-13	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
9	TTMTC SAM Site B08-2, ☐	46-00-30N 63-55-10E	UR 0216-14	SA-2, configuration undetermined			
10	TTMTC SAM Site B08A-2, ☐	46-00-20N 63-54-40E	UR 0216-14	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
11	TTMTC SAM Site B08B-2, ☐	46-00-00N 63-54-30E	UR 0216-14	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
12	TTMTC SAM Site B13-2, ☐	45-48-50N 63-43-55E	UR 0216-13	SA-2, configuration undetermined			
13	TTMTC SAM Site B13A-2, ☐	45-48-25N 63-44-15E	UR 0216-13	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
14	TTMTC SAM Site B13B-2, ☐	45-48-45N 63-44-50E	UR 0216-13	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
15	TTMTC SAM Site B21-2, ☐	45-42-00N 63-20-20E	UR 0216-13	SA-2, configuration undetermined			
16	TTMTC SAM Site B21A-2, ☐	45-42-50N 63-20-20E	UR 0216-13	SA-2, configuration undetermined			This unretired site was previously carried as a category 2 SA-0 SAM Site.
17	TTMTC SAM Support Facility, ☐	45-53-30N 63-25-50E	UR 0216-13	Type I (rectangular)			

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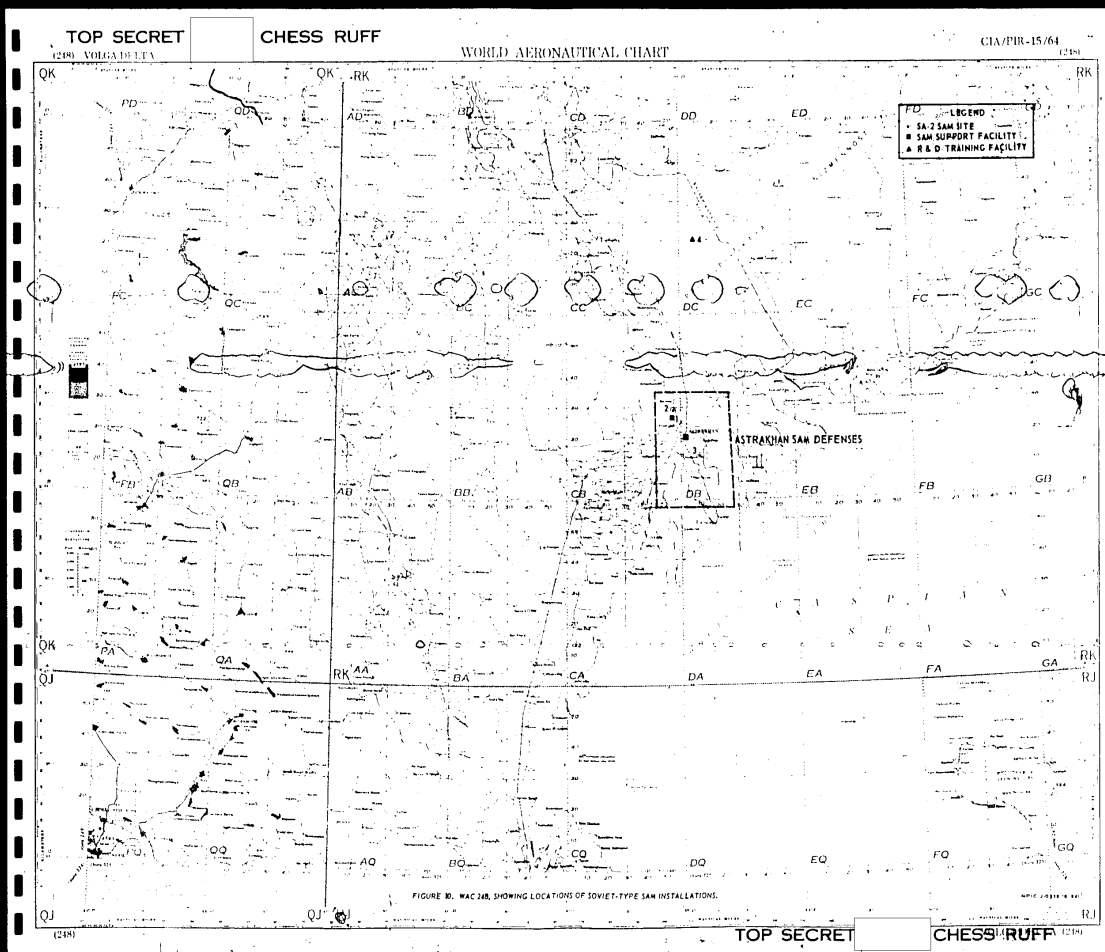


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Table B: SAM Installations on WAC 228

Item	Location & BE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Appears	Mission & Date Installation Negated	Remarks
A. Astrakhan SAM Defenses (in defense of major Caspian Sea port with shipyards, strategic transportation, and POL storage facilities)							
1	Astrakhan SAM Support Facility	46-26-00N 47-56-20E	UR 0248-9	Type II (square)			
2	Astrakhan SAM Site A14-2	46-28-00N 47-57-10E	UR 0248-9	SA-2, link			
3	Astrakhan SAM Site A14-2	46-14-50N 48-11-02E	UR 0248-14	SA-2, link			
B. Kordon SAM Training Area (no defense role-fulfills a training function only)							
4	Kordon SAM Training Area, [redacted]	47-24-00N 48-08-00E	UR PCL 248B	See remarks			The facilities at this installation consist of 9 SA-2 sites (5 fans, 1 link, 1 probable link, 2 undetermined), a Type I (rectangular) SAM support facility, a landing strip, and a housing and support area. The installation probably handles the largest portion of the Soviet SAM training program. Collateral reports indicate that Eastern European officers have undergone training in SA-2 systems here.



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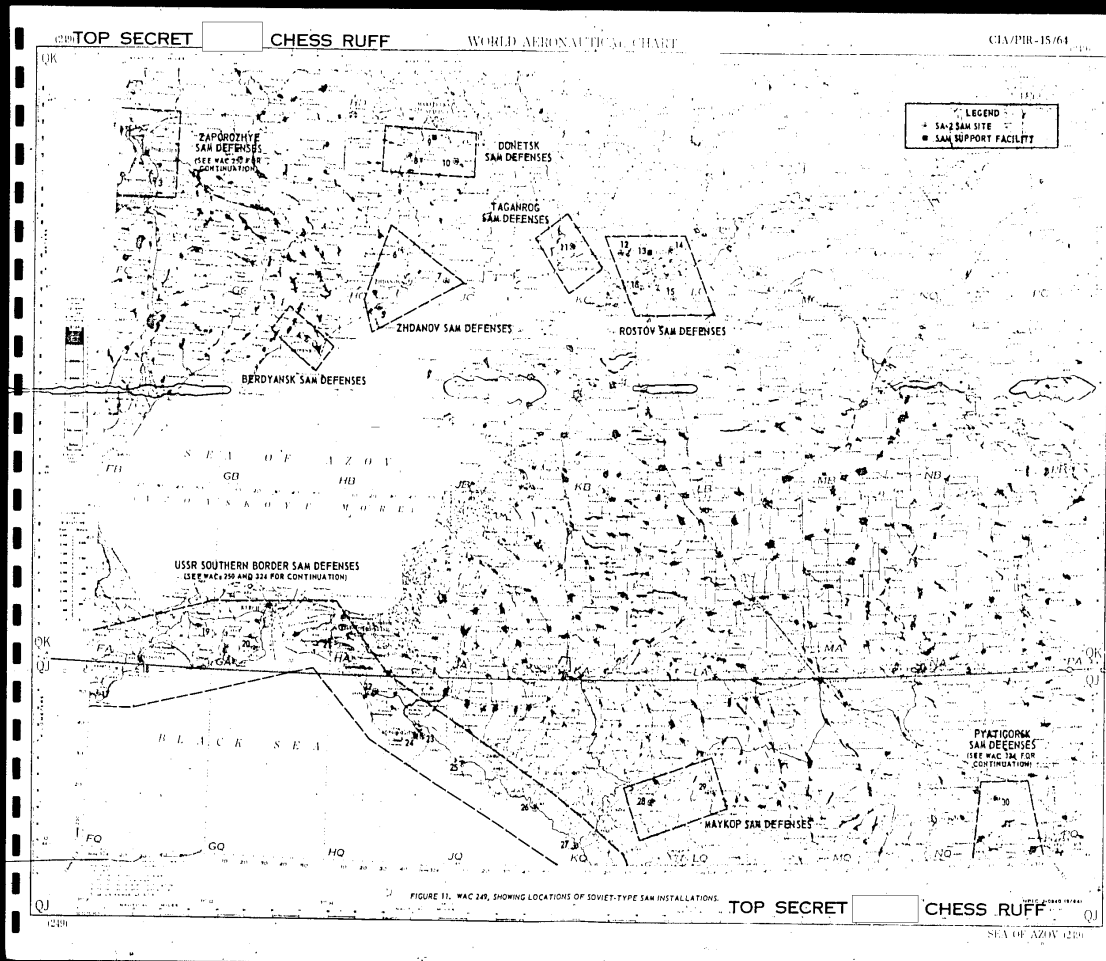
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Table 3. SAM Installations on WAC 223

Item	Name, Site Designator, & BE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Appears	Mission & Date Installation Negotiated	Remarks
A. Zaporozh'ye SAM Defenses (in defense of Zaporozh'ye; a major industrial complex which includes an alumina plant, an aluminum plant, a large steel plant, and an aircraft engine plant)							
1	Zaporozh'ye SAM Site B10-2	47-52-25N 35-24-30E	UR 0219-1	SA-2, star			
2	Zaporozh'ye SAM Support Facility	47-44-10N 35-15-30E	UR 0219-1	Type II (square)			
3	Zaporozh'ye SAM Site B16-2	47-36-35N 35-18-15E	UR 0219-1	SA-2, star			
B. Berdyansk SAM Defenses (in defense of Berdyansk)							
4	Berdyansk SAM Site A30-2	46-47-20N 36-41-45E	UR 0219-7	SA-2, star			
C. Zhdanov SAM Defenses* (in defense of Zhdanov; a major industrial and port complex on the Azov Sea)							
5	Zhdanov SAM Site B23-2	46-58-10N 37-20-00E	UR 0219-7	SA-2, star			
6	Zhdanov SAM Site B30-2	47-16-45N 37-31-00E	UR 0219-2	SA-2, star			
7	Zhdanov SAM Site B09-2	47-07-45N 37-34-00E	UR 0219-7	SA-2, star			
D. Donetsk SAM Defenses (in defense of Donetsk; a large industrial complex which includes an ammunition plant, a cokes-chemical plant, and an iron and steel plant)							
8	Donetsk SAM Site B22-2	47-47-00N 37-34-20E	UR 0219-2	SA-2, star			
9	Donetsk SAM Support Facility	47-53-00N 37-47-15E	UR 0219-2	Type I (rectangular)			
10	Donetsk SAM Site B10-2	47-45-30N 37-39-45E	UR 0219-2	SA-2, star			
E. Taganrog SAM Defenses** (in defense of Taganrog; industrial production-airframes, munitions, metallurgy, and transportation center)							
11	Taganrog SAM Site A01-2	47-10-10N 39-00-30E	UR 0219-3	SA-2, star			
F. Rostov SAM Defenses* (in defense of Rostov--a major industrial production center; aircraft assembly and machinery, POL storage, port and rail facilities)							
12	Rostov SAM Site B29-2	47-17-25N 39-26-50E	UR 0219-3	SA-2, link			
13	Rostov SAM Support Facility	47-17-30N 39-40-30E	UR 0219-3	Type I (rectangular)			
14	Rostov SAM Site A06-2	47-18-00N 39-52-05E	UR 0219-4	SA-2, star			
15	Rostov SAM Site B16-2	47-01-55N 39-55-45E	UR 0219-9	SA-2, link			
16	Rostov SAM Site B21-2	47-05-15N 39-36-25E	UR 0219-8	SA-2, star			
G. USSR Southern Border SAM Defenses* (in defense of the southern border of the USSR; major naval base and POL storage at Feodosiya; naval POL storage, and rail facilities at Novorossiysk and Tuapse; air defense sector and fighter division headquarters at Kymok; iron, steel, cokes-chemical plants, POL storage, major air base with special weapons storage, air defense sector head-quarters, and naval facilities at Kerch)							
17	Feodosiya SAM Site B21-2	44-40-40N 35-02-15E	UR 0219-10	SA-2, star			
18	Feodosiya SAM Site A16-2	45-00-40N 35-25-50E	UR 0219-10	SA-2, star			
19	Feodosiya SAM Site C06-2	45-13-40N 35-52-05E	UR 0219-10	SA-2, star			
20	Kerch SAM Site B20-2	45-07-50N 36-21-00E	UR 0219-10	SA-2, star			
21	Anapa SAM Site C33-2	45-10-10N 37-01-30E	UR 0219-17	SA-2, configuration undetermined			
22	Anapa SAM Site A07-2	44-54-20N 37-43-20E	UR 0219-17	SA-2, star			
23	Novorossiysk SAM Site A18-2	44-40-10N 37-47-00E	UR 0219-22	SA-2, star			
24	Novorossiysk SAM Support Facility	44-40-15N 37-46-45E	UR 0219-22	Type II (square)			
25	Novorossiysk SAM Site B13-2	44-32-50N 38-06-30E	UR 0219-22	SA-2, star			
26	Tuapse SAM Site C31-2	44-18-50N 38-43-00E	UR 0219-23	SA-2, star			
27	Tuapse SAM Site	44-05-50N 39-02-40E	UR 0219-23	SA-2 (see remarks)			This site is on the summit of a narrow ridge. It displays no configuration; the service roads merely follow the contours of the ridge.
H. Maykop MRBM Complex SAM Defenses** (in defense of Maykop MRBM Complex)							
28	Maykop SAM Site C25-2	44-30-30N 39-41-10E	UR 0219-23	SA-2, star			
29	Maykop MRBM Complex SAM Site A13-2	44-25-40N 40-09-10E	UR 0219-24	SA-2, star			
I. Pyatigorsk SAM Defenses** (in defense of Pyatigorsk)							
30	Pyatigorsk SAM Site C31-2	44-19-20N 42-52-00E	UR 0219-25	SA-2, star			

*These sites may represent part of the secondary barrier defense of the southern border of the USSR.

**These sites make up part of a secondary barrier stretching between the Black and Caspian Seas, along the northern edge of the Caucasus Mountains, in defense of southern border of the USSR.



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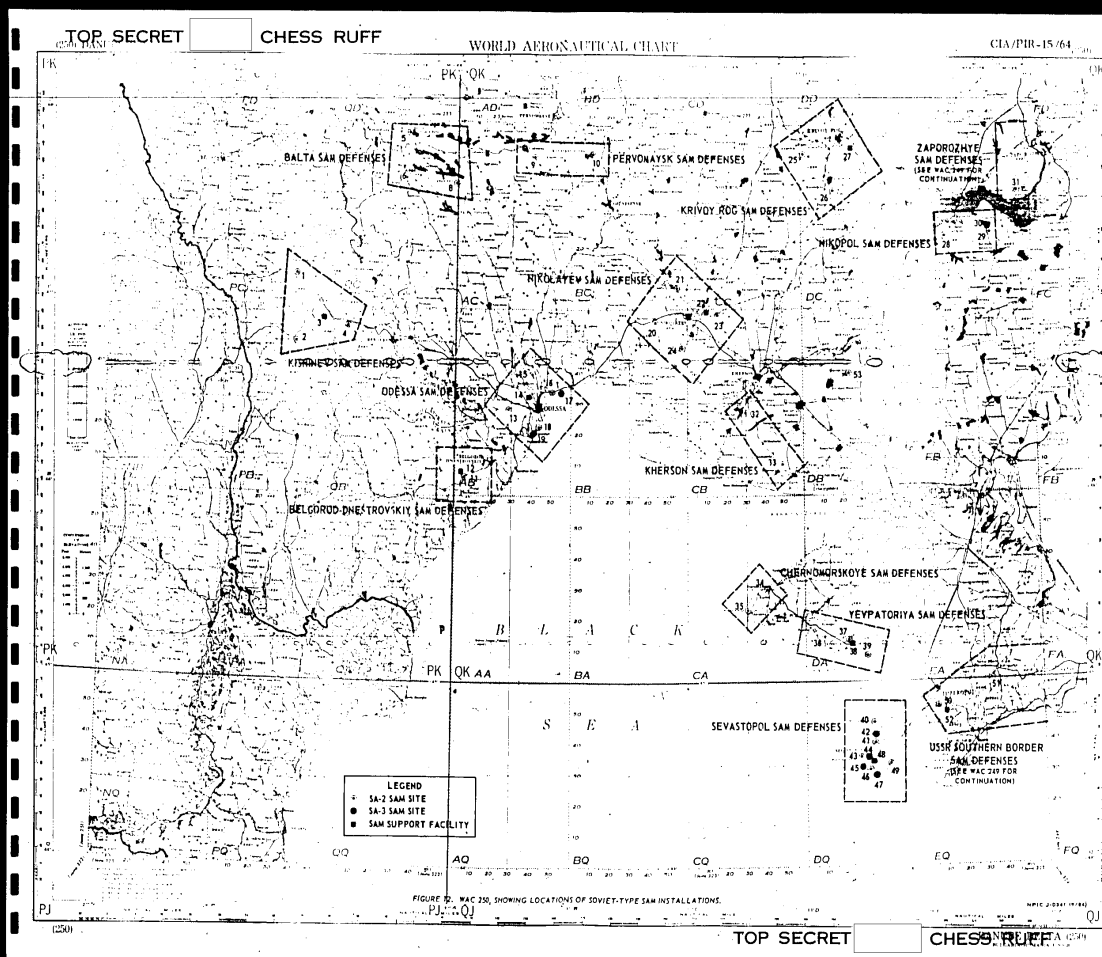
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Table 10. SAM Installations in R.U. 250

Item	Name, Site Designator, & BE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Appears	Mission & Date Installation Reported	Remarks
A. Kishinev SAM Defenses* (in defense of Kishinev, capital of the Moldavian SSR)							
1	Kishinev SAM Site B13-2, 	47-11-00N 28-38-20E	UR 0250-7	SA-2, link			
2	Kishinev SAM Site B22-2, 	46-48-30N 28-38-12E	UR 0250-7	SA-2, star			
3	Kishinev SAM Support Facility, 	46-55-00N 28-52-20E	UR 0250-7	Type II (square)			
4	Kishinev SAM Site B12-2, 	46-55-00N 29-04-00E	UR 0250-7	SA-2, star			
B. Baltia SAM Defenses* (in defense of Baltia regional military storage installation and nuclear weapons storage sites, and Baltia MRBM Complex)							
5	Baltia MRBM Complex SAM Site A17-2, 	47-56-50N 29-36-20E	UR 0250-2	SA-2, configuration undetermined			
6	Kotovsk SAM Site A11-2, 	47-44-20N 29-37-30E	UR 0250-2	SA-2, star			
7	Baltia SAM Support Facility, 	47-44-20N 29-57-30E	UR 0250-2	Type II (square)			
8	Kotovsk SAM Site B11-2, 	47-41-10N 29-00-00E	UR 0250-2	SA-2, star			
C. Pervomaysk SAM Defenses* (in defense of Pervomaysk MRBM Complex)							
9	Pervomaysk SAM Site B21-2, 	47-49-20N 30-41-05E	UR 0250-3	SA-2, star			
10	Pervomaysk SAM Site B11-2, 	47-50-10N 31-11-40E	UR 0250-3	SA-2, star			
D. Belgorod-Dnestrovskiy SAM Defenses* (in defense of Belgorod-Dnestrovskiy)							
11	Belgorod-Dnestrovskiy SAM Site B25-2, 	46-07-25N 30-04-10E	UR 0250-12	SA-2, star			
12	Kidymovsk SAM Support Facility, 	46-07-30N 30-01-10E	UR 0250-12	Type II (square)			
E. Odessa SAM Defenses* (in defense of Odessa—major industrial and military center and important Black Sea port; shipyard, mining and agricultural machinery production; PDR, refinery; vehicle assembly plants; Odessa military district and air defense sector headquarters)							
13	Odessa SAM Site A26-2, 	46-28-42N 30-29-30E	UR 0250-8	SA-2, star			
14	Odessa SAM Support Facility, 	46-32-00N 30-30-00E	UR 0250-8	Type I (rectangle)			
15	Odessa SAM Site B15-2, 	46-39-25N 30-40-10E	UR 0250-8	SA-2, star			
16	Odessa SAM Site A05-2, 	46-35-34N 30-52-10E	UR 0250-8	SA-2, fan			
17	Odessa SAM Site A05-2, 	46-34-40N 30-53-00E	UR 0250-8	SA-2, configuration F			
18	Odessa SAM Site A19-2, 	46-22-35N 30-44-15E	UR 0250-8	SA-2, star			
19	Odessa SAM Site A19-3, 	46-21-55N 30-42-40E	UR 0250-13	SA-2, configuration F			
F. Nikolayev SAM Defenses* (in defense of Nikolayev, a major port on the Black Sea area; two major shipyards and a light jet bomber base)							
20	Nikolayev SAM Site B27-2, 	46-56-52N 31-44-55E	UR 0250-8	SA-2, star			
21	Nikolayev SAM Site B15-2, 	47-07-50N 31-55-00E	UR 0250-9	SA-2, star			
22	Nikolayev SAM Support Facility, 	46-59-00N 32-09-00E	UR 0250-9	Type I (rectangle)			
23	Nikolayev SAM Site B09-2, 	46-58-00N 32-15-30E	UR 0250-9	SA-2, star			
24	Nikolayev SAM Site A19-2, 	46-48-15N 31-58-00E	UR 0250-9	SA-2, star			
G. Krivoy Rog SAM Defenses* (in defense of Krivoy Rog, center of the Krivoy Rog iron-ore range, and large industrial complex; large metallurgical plant and numerous heavy industries; air base for fighters and light bombers)							
25	Krivoy Rog SAM Site B26-2, 	47-50-05N 33-01-30E	UR 0250-4	SA-2, star			
26	Krivoy Rog SAM Site B19-2, 	47-58-45N 33-17-50E	UR 0250-4	SA-2, link			
27	Krivoy Rog SAM Support Facility, 	47-51-40N 33-28-30E	UR 0250-5	Type II (square)			

*Although these sites are grouped in defense of specific targets, they provide sufficient overlapping coverage to act as the southern border defense between Simferopol and the Romanian border area. The obvious southern border defense begins with the Simferopol SAM sites and proceeds eastward.

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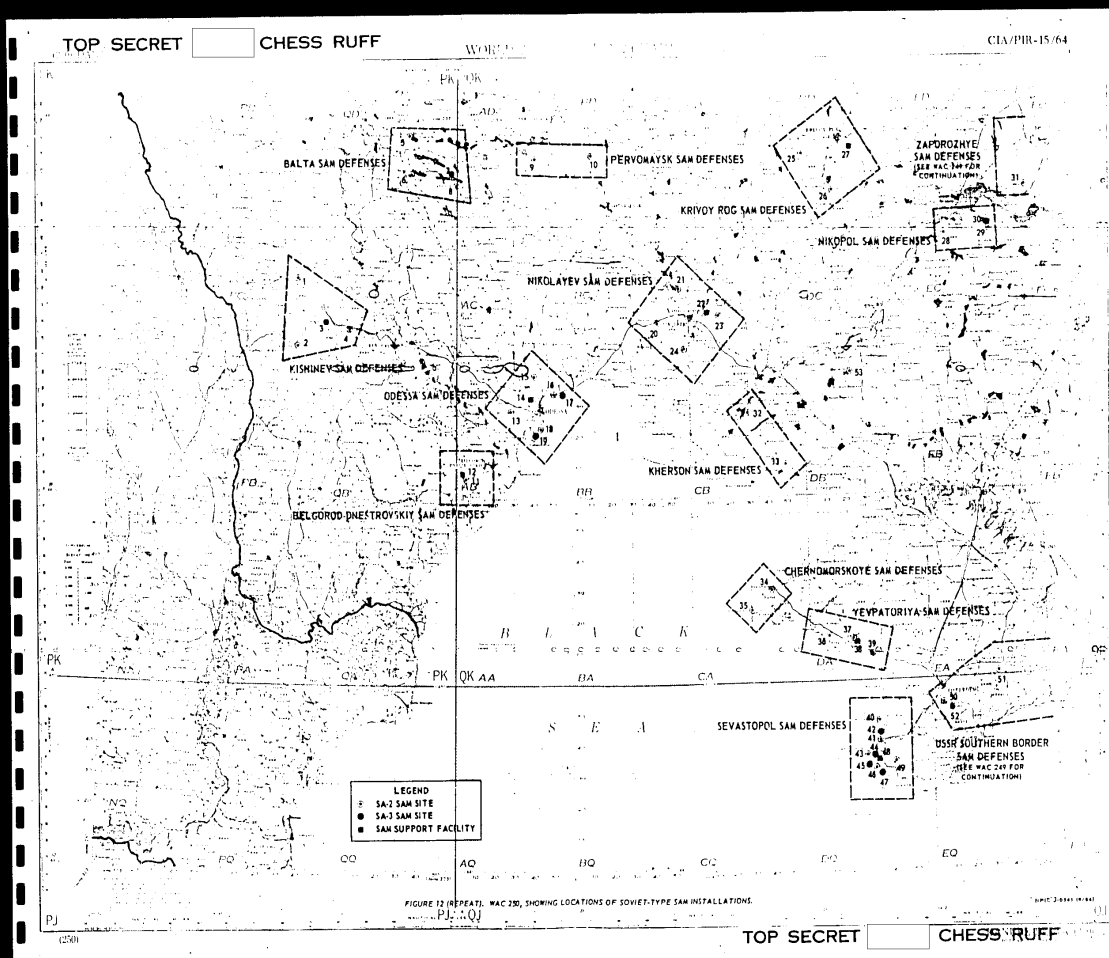
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Table 10. (Continued)

Item	Name, Site Designator, & BE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Reported	Mission & Date Installation Suggested	Remarks
H. Nikolai SAM Defenses (in defense of Nikolai: transportation and industrial center; pipe production and machine building)							
28	Nikolai SAM Site B22-2	47-23-15N 34-13-30E	UR 0250-5	SA-2, star			
29	Nikolai SAM Site B14-2	47-24-15N 34-26-30E	UR 0250-5	SA-2, star			
30	Nikolai SAM Support Facility	47-21-25N 34-36-10E	UR 0250-5	Type II (square)			
I. Zapozhny SAM Defenses (in defense of Zapozhny, a major industrial complex: an aluminum plant, an aluminum plant, a large steel plant, and an aircraft engine plant)							
31	Zapozhny SAM Site B21-2	47-56-20N 34-59-38E	UR 0250-5	SA-2, star			
J. Kherson SAM Defenses* (in defense of Kherson, a large industrial complex: agricultural machinery production, POL refinery, shipyard)							
32	Kherson SAM Site B21-2	46-27-15N 32-29-30E	UR 0250-9	SA-2, star			
33	Kherson SAM Site C17-2	46-10-20N 32-50-20E	UR 0250-11	SA-2, star			
K. Chernomorskoye SAM Defenses* (in defense of Chernomorskoye and Krasnodarskoye cruise missile launch sites)							
34	Chernomorskoye SAM Site A25-2	45-30-48N 32-40-50E	UR 0250-10	SA-2, star			
35	Chernomorskoye SAM Site B21-2	45-23-15N 32-29-25E	UR 0250-10	SA-2, star			
L. Yevpatoriya SAM Defenses* (in defense of Yevpatoriya: minor port complex, rail facilities, POL storage, and a ship repair facility)							
36	Yevpatoriya SAM Site B30-2	45-15-40N 33-00-00E	UR 0250-19	SA-2, star			
37	Yevpatoriya SAM Site A02-2	45-15-10N 33-25-50E	UR 0250-19	SA-2, probable star			
38	Yevpatoriya SAM Support Facility	45-17-50N 33-23-00E	UR 0250-19	Type II (square)			
39	Sak SAM Site A26-2	45-08-10N 33-31-40E	UR 0250-20	SA-2, star			
M. Sevastopol SAM Defenses* (in defense of Sevastopol: major military and industrial center; Headquarters Black Sea Fleet, three nuclear missile submarines, facilities, and torpedo boat pens; ammunition, mine, torpedo, and POL storage facilities; submarine base and cruise missile site at Balaklava, cruise missile site at Sevastopol, and jet fighter bases; chemical, machinery, armaments, and munitions production)							
40	Sevastopol SAM Site B01-2	44-47-00N 33-32-45E	UR 0250-25	SA-2, star			
41	Sevastopol SAM Site A01-2	44-41-55N 33-33-25E	UR 0250-25	SA-2, star			
42	Sevastopol SAM Site A01-3	44-42-55N 33-35-10E	UR 0250-25	SA-2, configuration F			
43	Sevastopol SAM Site A27-2	44-35-50N 33-25-45E	UR 0250-25	SA-2, star			
44	Sevastopol SAM Site A27-3	44-35-15N 33-25-50E	UR 0250-25	SA-2, configuration F			
45	Sevastopol SAM Site A23-3	44-32-00N 33-26-00E	UR 0250-25	SA-2, probable configuration F			
46	Sevastopol SAM Site A10-2	44-31-25N 33-31-00E	UR 0250-25	SA-2, star			
47	Sevastopol SAM Site A17-3	44-30-00N 33-34-10E	UR 0250-25	SA-2, configuration undetermined			
48	Sevastopol SAM Support Facility	44-34-15N 33-32-55E	UR 0250-25	Type I (rectangular)			
49	Sevastopol SAM Site A11-2	44-34-15N 33-34-00E	UR 0250-25	SA-2, star			
N. USSR Southern Border SAM Defenses (in defense of the southern border of the USSR and specific targets, including Simferopol MRBM Complex; Simferopol area complex: two jet fighter airfields, military camp, and a space tracking and communication facility; and Sarabuz airfield special weapons storage site)							
50	Simferopol SAM Site A10-2	44-52-35N 34-05-25E	UR 0250-20	SA-2, star			
51	Simferopol SAM Site C08-2	44-01-35N 34-14-00E	UR 0250-20	SA-2, star			
52	Simferopol SAM Support Facility	44-50-00N 34-09-00E	UR 0250-20	Type II (square)			
O. Defensive Role Undetermined							
53	Kherson SAM Site B09-2	46-30-00N 33-23-55E	UR 0250-9	SA-2, star			

*Although these sites are grouped in defense of specific targets, they provide sufficient overlapping coverage to act as the southern border defense between Simferopol and the Romanian border area. The obvious southern border defense begins with the Simferopol SAM sites and proceeds eastward.



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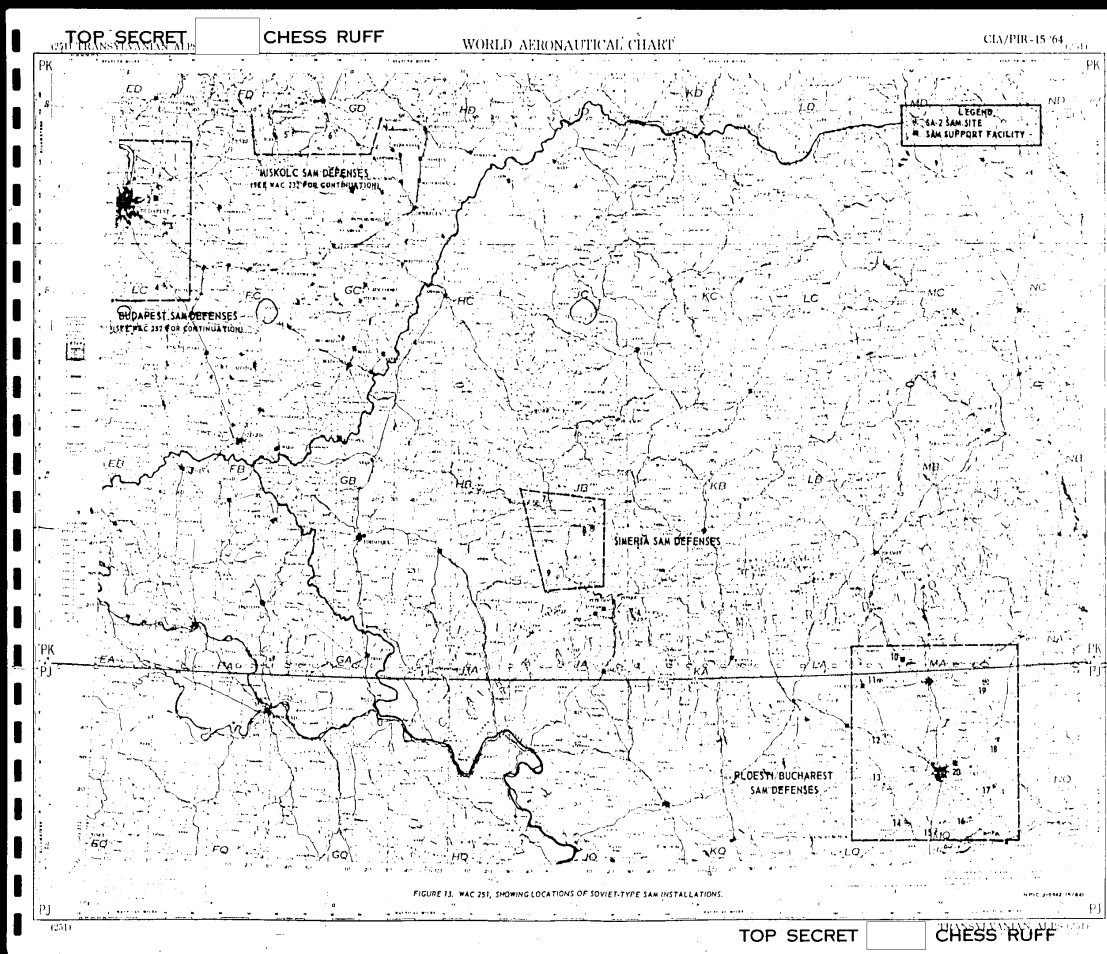
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Table 11. SAM Installations on WAC 251

Item	Name, Site Designator, & BE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Appeared	Mission & Date Installation Negated	Remarks
A. Budapest (Hungary) SAM Defenses (in defense of Budapest-capital of Hungary, and Headquarters of Soviet Forces Hungary; major Hungarian and Soviet military installations, major river port and rail center, important industrial complex, including the largest shipyard in Hungary)							
1	Budapest SAM Site B05-2	47-39-58N 19-22-55E	Hu 0251-1	SA-2, fan			
2	Nagytercs SAM Support Facility	47-32-15N 19-20-25E	Hu 0251-1	Type I (rectangular)			
3	Budapest SAM Site B12-2	47-25-45N 19-25-53E	Hu 0251-1	SA-2, fan			
4	Budapest SAM Site C16-2	47-06-22N 19-26-52E	Hu 0251-6	SA-2, probable fan			
B. Miskolc (Hungary) SAM Defenses (in defense of Miskolc: major Hungarian iron- and steel-producing area and heavy industrial complex with major transportation facilities)							
5	Miskolc SAM Site B23-2	47-55-30N 20-32-40E	Hu 0251-1	SA-2, fan			
6	Miskolc SAM Site B15-2	47-56-20N 20-55-30E	Hu 0251-2	SA-2, fan			
C. Simeria (Romania) SAM Defenses (in defense of Simeria: large metallurgical combine, and large iron and machinery works)							
7	Simeria SAM Site B20-2	45-57-15N 22-43-58E	Ru 0251-13	SA-2, configuration undetermined			
8	Simeria SAM Site A11-2	45-49-50N 22-11-00E	Ru 0251-13	SA-2, fan			
9	Simeria SAM Site B10-2	45-52-40N 22-54-30E	Ru 0251-18	SA-2, fan			
D. Ploesti-Bucharest (Romania) SAM Defenses (in defense of Bucharest, capital of Romania, and Ploesti: Bucharest-aircraft and railroad equipment industries, military and commercial center; Ploesti-large industrial and petroleum refining center)							
10	Ploesti SAM Support Facility	45-03-45N 25-49-00E	Ru 0251-20	Type I (rectangular)			The service roads at this site consist of a series of parallel roads, a configuration peculiar to Romania.
11	Ploesti SAM Site B27-2	44-58-15N 25-56-30E	Ru 0251-20	SA-2 (see remarks)			
12	Ploesti SAM Site C31-2	44-59-00N 25-38-00E	Ru 0251-25	SA-2, fan			The service roads at this site consist of a series of parallel roads, a configuration peculiar to Romania. The service roads at this site consist of a series of parallel roads, a configuration peculiar to Romania. The service roads at this site consist of a series of parallel roads, a configuration peculiar to Romania.
13	Bucharest SAM Site C27-2	44-25-30N 25-37-43E	Ru 0251-25	SA-2, fan			
14	Bucharest SAM Site B25-2	44-41-20N 25-46-30E	Ru 0251-25	SA-2, fan			
15	Bucharest SAM Site B19-2	44-07-30N 26-03-43E	Ru 0251-25	SA-2, fan			
16	Bucharest SAM Site B15-2	44-11-50N 26-20-40E	Ru 0251-25	SA-2 (see remarks)			The service roads at this site consist of a series of parallel roads, a configuration peculiar to Romania. The service roads at this site consist of a series of parallel roads, a configuration peculiar to Romania. The service roads at this site consist of a series of parallel roads, a configuration peculiar to Romania.
17	Bucharest SAM Site B13-2	44-21-12N 26-32-25E	Ru 0251-25	SA-2 (see remarks)			
18	Bucharest SAM Site C07-2	44-36-10N 26-36-00E	Ru 0251-25	SA-2 (see remarks)			
19	Ploesti SAM Site C10-2	44-55-50N 26-30-00E	Ru 0251-20	SA-2, fan			
20	Bucharest SAM Support Facility	44-29-00N 26-13-45E	Ru 0251-25	Type II (square)			

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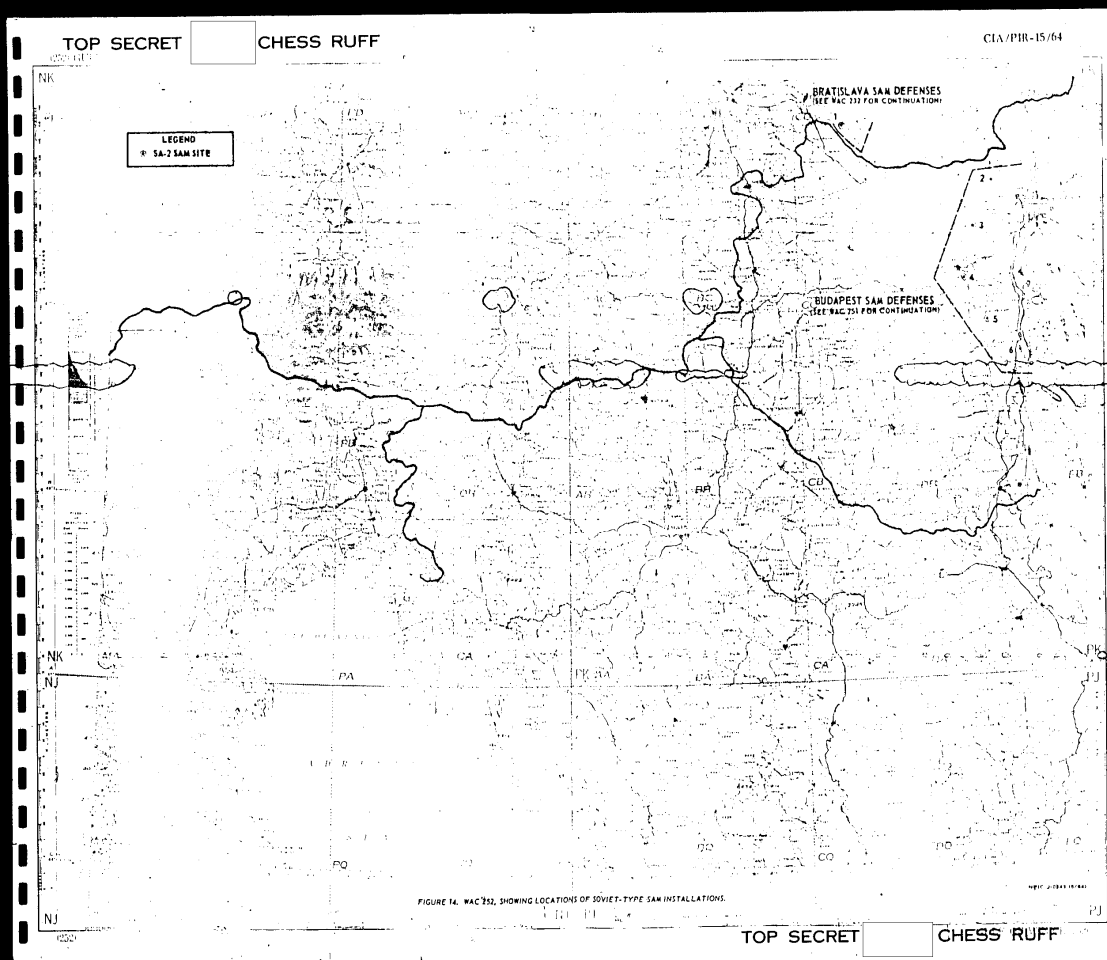
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Table II. SAM Installations on WAC 152

Item	Name, Site Designator, & DE No	Coordinates	Country & Map Ref	Type & Configuration	Mission & Date First Appared	Installation Negated	Remarks
A. Bratislava (Czechoslovakia) SAM Defenses (in defense of major military center with important industrial facilities, including PDL, explosives, wire and cable, and electrical engineering products)							
1	Nitra SAM Site D24-2	47-50-15N 17-26-00E	Cz 0252-5	SA-2, fan			
B. Budapest (Hungary) SAM Defenses (in defense of Budapest-capital of Hungary, and Headquarters of Soviet Forces Hungary; numerous Hungarian and Soviet military installations, major river port and rail center, important industrial complex, including the largest shipyard in Hungary)							
2	Budapest SAM Site B31-2	47-39-50N 18-44-48E	Hu 0252-5	SA-2, fan			
3	Budapest SAM Site C26-2	47-24-10N 18-33-40E	Hu 0252-5	SA-2, fan			
4	Budapest SAM Site D21-2	47-08-47N 18-28-40E	Hu 0252-5	SA-2, probable fan			
5	Danubius SAM Site B38	46-54-00N 18-25-00E	Hu 0252-10	SA-2, fan			
6	Danubius SAM Site A10	46-44-00N 18-51-30E	Hu 0252-10	SA-2, fan			

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REQUIREMENT

CIA. C-RB3-80,733

PROJECT

C-1560/83 (partial answer)

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